

December 20, 2010

Wyo. Natural Gas Fracking Rules for Point the Way for Public Disclosure of Chemicals Used

By MIKE SORAGHAN of

To coax more oil from a wildcat well named "Mad Hatter," Halliburton Co. is planning to inject water mixed with small concentrations of naphthalene, ethanol, "1,2,4-Trimethylbenzene" and "hydrotreated light petroleum distillate" into a hole in the ground near Casper, Wyo.

Such detailed chemical information was once a closely guarded secret. But it is available to anyone with an Internet connection now that Wyoming is demanding that drillers disclose each chemical that they are putting in each well.

Led by Gov. Dave Freudenthal (D), state regulators decided that the best response to fears about water contamination and the prospect of federal regulation was to order the country's most detailed disclosures of the ingredients used in hydraulic fracturing.

Though companies had long argued that fracturing fluid recipes are trade secrets worth millions of dollars, there has been relatively little grumbling since the rules kicked in Sept. 15.

"I'm not hearing many complaints," said John Robitaille, vice president of the Petroleum Association of Wyoming. "I think we're OK."

And Wyoming's regulations could be the shape of things to come. The Obama administration is looking to the Cowboy State as a model for fracturing disclosure on federal lands in the West. Interior Department officials figure it would be hard to argue against an approach developed in petroleum-friendly Wyoming.

If that led to Western state governments adopting similar rules, Eastern states such as Pennsylvania could feel pressure to demand similar information from drillers tapping into the rich Marcellus Shale.

"It will certainly become a model for disclosure," said Dave Alberswerth, a former Clinton administration Interior official now with the Wilderness Society. "It'll be more difficult for industry to argue against this."

In fracturing, crews inject tanker-loads of water and sand underground to blow apart the rock and release gas. A small fraction of that concoction is a mixture of chemicals as mundane as ice cream thickener and as toxic as benzene.

Improvements in fracturing technology have opened the vast shale formations in Pennsylvania and other states that were previously considered too difficult and expensive to tap.

But the rapid expansion of drilling and fracturing has intensified fears that the toxins and carcinogens in fracturing fluid might contaminate drinking water. Environmentalists and congressional Democrats have pushed not only for public disclosure of fracturing chemicals but also stricter federal regulation of the practice.

Drilling companies, though, say fracturing is safe and existing state regulation is sufficient. They stress that the fracturing fluid is injected thousands of feet below drinking water aquifers and maintain that there has never been a proven case of groundwater contamination from the fracturing process.

Hushing the debate

With the regulations, Wyoming has done what Washington failed to do: quiet the burgeoning debate about fracturing.

The rules accomplish much of what congressional Democrats and environmental groups were seeking in the arena of disclosure. Though they cover only one state, that state accounts for a tenth of all gas production in the United States. Neither industry nor environmentalists are completely happy with the disclosure regulations, but both have accepted them.

The oil and gas industry has arrived at this point after years of struggle. Companies have long maintained that public disclosure of fracturing fluid ingredients would unfairly cost them millions of dollars. In a filing with the Securities and Exchange Commission earlier this year, Halliburton said federal or state requirements to disclose the composition of fracturing fluid would be a regulatory burden that could decrease profits.

Halliburton spokeswoman Teresa Wong referred questions about the Wyoming regulations to trade groups such as the Petroleum Association of Wyoming.

"As for Halliburton, we will of course continue to comply with all laws and regulations," Wong said.

But as pressure grew, companies such as Exxon Mobil Corp. insisted that they actually were disclosing the ingredients because they posted "material safety data sheets" (MSDS) at work

sites. But those information sheets are for industrial accidents, not groundwater monitoring, and they often omit key data.

When Colorado overhauled its regulations in 2007, it required more disclosure, but not to the public. Colorado now requires drillers to keep a detailed inventory, but they only give a copy to regulators if asked.

But as the public profile of fracturing has risen to become the subject of independent film documentaries and network shows like "CSI: Crime Scene Investigation," more companies have embraced the need for full public disclosure.

"Giving the public a greater sense of transparency is an important step forward," Anadarko Petroleum Corp. spokesman John Christiansen said. "Once the process is better understood, we think the public will be more comfortable with it."

Industry advocates say that the quiet compliance of drillers of Wyoming proves that their objections were not so much about informing the public so much as opposition to giving more power to a federal agency such as U.S. EPA.

Arkansas has approved well-by-well disclosure regulations that go into effect next year. Also, an association of state oil and gas regulators called the Ground Water Protection Council is developing a voluntary system for well-by-well disclosure that has been endorsed by drilling companies.

Interior studies Wyo. model

Still, other Western states have even fewer requirements for disclosure. New Mexico regulations, for instance, do not address disclosure of fracturing chemicals.

In the East, Pennsylvania currently requires public disclosure of fracturing chemicals, but only the MSDS sheets, which are available at regional offices. But amid a strengthening gas rush, the state is still determining how it will tax and regulate oil and gas production. New York has banned most high-volume fracturing while it studies the process and develops rules.

Congressional efforts to force disclosure of chemicals stalled this year and will likely disappear when Republicans take over the House next year. But at a forum on fracturing late last month, Interior Secretary Ken Salazar announced his department plans to develop rules on public disclosure of fracturing chemicals used on the vast public lands of the West (*E&ENews PM*, Nov. 30).

"I'd like to see that happen," Wyoming Oil and Gas supervisor Tom Doll, who shepherded the

new regulations, said in an interview. "What we're saying is have something that's working. Nothing beats success like success."

Interior officials confirmed that they are looking to Wyoming as a model for such regulations, which would primarily affect lands and minerals overseen by the Bureau of Land Management. And Salazar gave Doll a keynote role at Interior's fracturing forum. Administration officials used the forum to explore how public disclosure has worked on federal lands in Wyoming.

Still, Salazar's announcement sparked outrage from Republicans on Capitol Hill.

"I oppose adding burdensome, new red-tape that will further discourage oil and gas production on public lands in the West," Sen. John Barrasso (R-Wyo.) wrote to Salazar after the announcement.

Barrasso declined to comment about how he would react to Interior adopting Wyoming's rules, saying through a spokeswoman that he would not comment on a "hypothetical situation."

Drillers also remain wary of the idea of federal regulation, even if it is modeled on rules they have accepted at the state level.

"If they copied it verbatim, we'd have no problem with it here in Wyoming," the state petroleum association's Robitaille said. "But in my experience, that's not how it works."

As gratified as they are to see movement toward greater disclosure, environmentalists say they still want to see stricter regulation, preferably by U.S. EPA under the Safe Drinking Water Act.

"Disclosure helps only after your water is contaminated. It doesn't prevent your water from being contaminated," said Amy Mall of the Natural Resources Defense Council.

'Trade secrets'

And environmentalists are also worried that Wyoming is agreeing to too many industry requests to shield compounds as "trade secrets."

"While we've been getting disclosure, it looks like that will be tightening up," said Jill Morrison, an organizer with the Powder River Basin Resource Council in Sheridan, Wyo.

But Doll said secrecy will be the exception, not the rule. He said his staff has been careful not to shield the chemical ingredients of broadly used "plain vanilla" fracturing fluid.

"Initially, I think people thought, 'They'll say that everything is a trade secret,'" Doll said. "That hasn't been the case."

The application for the Mad Hatter well, a "**frack job** (pdf)" for Strachan Exploration Inc. of Englewood, Colo., was **denied** (pdf) last month because it failed to list the ingredients of compounds for which Halliburton had not yet received trade secret protection.

The Wyoming Oil and Gas Conservation Commission **website** lists 16 approvals for trade secret protection, some for single products and some for long lists of compounds.

Halliburton has gotten five fracturing products shielded. BJ Services won trade secret status for 36 products, including fracturing sand.

Their requests are public record, and their reasoning points to the importance of fracturing chemicals, even though they amount to a tiny fraction of the total volume of what is injected.

ChemEOR Inc., a Los Angeles-based oilfield chemical company, told Wyoming regulators it spent more than \$400,000 directly on research and development of a product called InFlo 250 W. Halliburton said it spent "tens of millions of dollars" researching new fracturing fluids during the past five years. The company said that public disclosure of its proprietary formulas could cost it \$375 million.

Halliburton also argues that public disclosure of the chemicals in the compound would discourage research into fracturing fluids that reduce damage to the environment.

Wyoming regulators gave trade secret protection to many products that are toxic, which could keep raising questions about the value of secrecy. An **MSDS sheet** (pdf) on file with Ohio regulators, shows that ChemEOR's Inflo 250 W contains toxic methanol and 2-Butoxyethanol, a fracturing ingredient cited in several contamination allegations, and other hazardous components.

In several cases, Wyoming regulators granted trade secret status to compounds used by Halliburton and BJ Services but stated that they "are not approved for use in groundwater." That generally means they include some form of hydrocarbon, such as a petroleum distillate.

"The thing about trade secret protection," NRDC's Mall said, "is that it's only going to work if the public thinks it's credible."

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